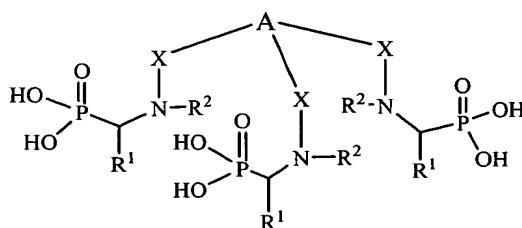


Amendments to the Claims

Listing of Claims

1. (*currently amended*) A tripodal polyaminophosphonate chelant having the formula:



and pharmaceutically acceptable salts thereof,

wherein

A is selected from the group consisting of CR³, SiR³, GeR³, N, P, P=O, P=S, As, As=O, and a macrocyclic group having the formula:

-[C(L)R¹²(CR¹³R¹⁴)_a]_b-,

-[N(L)C(W)(CR¹⁵R¹⁶)_c]_d-,

-[OC(W)C(L)R¹⁷(CR¹⁸R¹⁹)_e]_f- or

-{[NR²⁰C(W)C(L)R²¹(CR²²R²³)_g]_h[NR²⁴C(W)(CR²⁵R¹⁶)_i]_j}-,

wherein

a is an integer selected from 1 to 3;

b is an integer selected from 3 to 5;

c is an integer selected from 1 to 3;

d is an integer selected from 3 or 4;

e is an integer selected from 1 to 3;

f is an integer selected from 3 or 4;

g is an integer selected from 1 to 3;

h is an integer selected from 3 or 4;

i is an integer selected from 1 to 3;

j is an integer selected from 0 to 3;

L is a direct bond to X;

W is H₂ or O;

R¹ is (CR⁴R⁵)_nR⁶, wherein n is an integer selected from 0 to 3;

R² is selected from the group consisting of C₁-C₁₀ fluoroalkyl substituted with 0-5 R⁷, C₂-C₁₀ alkenyl substituted with 0-5 R⁷, C₂-C₁₀ fluoroalkenyl substituted with 0-5 R⁷, aryl substituted with 0-5 R⁷, heteroaryl substituted with 0-5 R⁷ and fluoroaryl substituted with 0-5 R⁷;

R², R³, R⁴, R⁵ and R⁶ are independently selected from the group consisting of H, C₁-C₁₀ alkyl substituted with 0-5 R⁷, C₁-C₁₀ fluoroalkyl substituted with 0-5 R⁷, C₂-C₁₀ alkenyl substituted with 0-5 R⁷, C₂-C₁₀ fluoroalkenyl substituted with 0-5 R⁷, aryl substituted with 0-5 R⁷, heteroaryl substituted with 0-5 R⁷ and fluoroaryl substituted with 0-5 R⁷; or R⁴ and R⁵ may be taken together to form a C₃-C₁₀ cycloalkyl or C₃-C₁₀ cycloalkenyl optionally interrupted with C(O)NH, NH, NHC(O), NHC(O)NH, NHC(S)NH, O, S, S(O), S(O)₂, P(O)(OR⁸), P(O)(OR⁸)O, P(O)(NHR⁷)O, or to form an aryl substituted with 0-5 R⁷, a fluoroaryl substituted with 0-5 R⁷ or an N-containing heterocycle substituted with 0-5 R⁷;

R⁷ is selected from the group consisting of H, OH, C(=O)R⁸, C(=O)OR⁸, C(=O)NR⁸, PO(OR⁸)₂ and S(O)₂OR⁸;

R⁸ is selected from the group consisting of H, C₁-C₆ alkyl, C₃-C₆ cycloalkyl, C₁-C₆ fluoroalkyl, C₁-C₆ alkenyl, C₃-C₆ cycloalkyl, C₁-C₆ fluoroalkenyl, benzyl, fluorobenzyl, phenyl and fluorophenyl;

X is selected from the group consisting of (CR⁹R¹⁰)_m, NR¹¹, and O(CR⁹R¹⁰)_m, wherein m is an integer selected from 1 to 3, provided that when A is N or -[N(L)C(W)(CR¹⁵R¹⁶)_c]_d-, X is (CR⁹R¹⁰)_m;

R⁹, R¹⁰ and R¹¹ are independently selected from the group consisting of H, C₁-C₁₀ alkyl substituted with 0-5 R⁷, C₁-C₁₀ fluoroalkyl substituted with 0-5 R⁷, C₂-C₁₀

alkenyl substituted with 0-5 R^7 , C_2 - C_{10} fluoroalkenyl substituted with 0-5 R^7 , aryl substituted with 0-5 R^7 and fluoroaryl substituted with 0-5 R^7 ; or R^9 and R^{10} may be taken together to form a C_3 - C_{10} cycloalkyl or C_3 - C_{10} cycloalkenyl optionally interrupted with C(O)NH, NH, NHC(O), NHC(O)NH, NHC(S)NH, O, S, S(O), S(O)₂, P(O)(OR⁸), P(O)(OR⁷)O, P(O)(NHR⁷)O, or to form an aryl substituted with 0-5 R^8 or fluoroaryl substituted with 0-5 R^8 ; and

R^{12} , R^{13} , R^{14} , R^{15} , R^{16} , R^{17} , R^{18} , R^{19} , R^{20} , R^{21} , R^{22} , R^{23} , R^{24} , R^{25} , and R^{26} are independently selected at each occurrence from the group consisting of H, C_1 - C_6 alkyl, C_3 - C_6 cycloalkyl, C_1 - C_6 fluoroalkyl, C_1 - C_6 alkenyl, C_3 - C_6 cycloalkenyl, C_1 - C_6 fluoroalkenyl, benzyl, fluorobenzyl, phenyl and fluorophenyl.

2. (currently amended) A tripodal polyaminophosphonate chelant according to claim 1, wherein:

A is selected from the group consisting of CR^3 , N and $P=O$;

R^1 is $(CH_2)_nR^6$;

R^2 , R^3 and R^6 are independently selected from the group consisting of H, C_1 - C_{10} alkyl substituted with 0-2 R^7 , C_1 - C_{10} fluoroalkyl substituted with 0-2 R^7 , C_2 - C_{10} alkenyl substituted with 0-2 R^7 , C_2 - C_{10} fluoroalkenyl substituted with 0-2 R^7 , aryl substituted with 0-2 R^7 , fluoroaryl substituted with 0-2 R^7 and heteroaryl substituted with 0-2 R^7 ;

X is selected from the group consisting of $(CH_2)_m$, NR^{11} and $O(CR^9R^{10})_m$, wherein m is an integer selected from 1 to 3, provided that when A is N, X is $(CH_2)_m$; and

R^{11} is selected from the group consisting of H, C_1 - C_{10} alkyl substituted with 0-2 R^7 , C_1 - C_{10} fluoroalkyl substituted with 0-2 R^7 , C_2 - C_{10} alkenyl substituted with 0-2 R^7 , C_2 - C_{10} fluoroalkenyl substituted with 0-2 R^7 , aryl substituted with 0-2 R^7 and fluoroaryl substituted with 0-2 R^7 .

3. (*currently amended*) A tripodal polyaminophosphonate chelant according to claim 2, wherein:

A is CR^3 or N;

n is 0 or 1;

~~R^2 and R^3 are independently~~ is selected from the group consisting of H, C_1 - C_{10} alkyl, C_1 - C_{10} fluoroalkyl, C_2 - C_{10} alkenyl, C_2 - C_{10} fluoroalkenyl, aryl and fluoroaryl;

R^6 is an aryl or heteroaryl group substituted with 0-2 R^7 ;

R^7 is selected from the group consisting of H, OH, $\text{C}(=\text{O})\text{OH}$, $\text{C}(=\text{O})\text{NH}_2$, $\text{PO}(\text{OH})_2$ and $\text{S}(\text{O})_2\text{OH}$; and

X is $(\text{CH}_2)_m$, wherein m is 1 or 2.

4. (*currently amended*) A tripodal polyaminophosphonate chelant according to claim 3, wherein:

A is CR^3 or N;

~~R^2 is H;~~

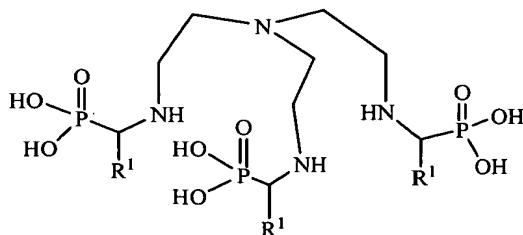
R^3 is selected from the group consisting of H, C_1 - C_{10} alkyl and C_1 - C_{10} aryl;

R^6 is an aryl or heteroaryl group substituted with 0-2 R^7 ;

R^7 is selected from the group consisting of H, OH, $\text{C}(=\text{O})\text{OH}$, $\text{PO}(\text{OH})_2$ and $\text{S}(\text{O})_2\text{OH}$; and

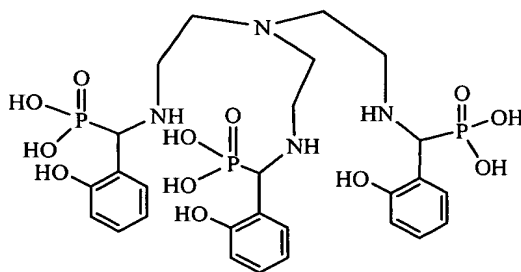
X is $(\text{CH}_2)_m$, wherein m is 1 or 2.

5. (*currently amended*) A tripodal polyaminophosphonate chelant ~~according to claim 4~~, having the formula:



wherein R¹ is selected from the group consisting of phenyl, benzyl, imidazolyl, pyridyl and thiophenyl, each substituted with 0-2 OH.

6. (*original*) A tripodal polyaminophosphonate chelant according to claim 5, having the formula:



Claims 7 to 42 (*withdrawn*)

43. (*currently amended*) A pharmaceutical composition for treating heavy metal toxicity in a patient in need thereof, comprising a ~~therapeutic-ally~~ therapeutically effective amount of the tripodal polyaminophosphonate chelant of claim 1 and a pharmaceutically acceptable carrier.

Claims 44 to 60 (*withdrawn*)

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61. (*new*) A pharmaceutical composition for treating heavy metal toxicity in a patient in need thereof, comprising a therapeutically effective amount of the tripodal polyaminophosphonate chelant of claim 5 and a pharmaceutically acceptable carrier.